

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-40. (Cancelled)

41. (New) An isolated nucleic acid molecule selected from the group consisting of:

- (a) nucleic acid molecules comprising the nucleotide sequence of SEQ ID NO:1;
- (b) nucleic acid molecules encoding a peptide having the amino acid sequence of SEQ ID NO: 2, or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol;
- (c) nucleic acid molecules which hybridize to a nucleic acid molecule complementary to the nucleic acid molecule of (a), or (b) or fragment thereof, and which encode a peptide having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol; and
- (d) nucleic acid molecules comprising a nucleotide sequence having at least 40% identity with the sequence of SEQ

ID NO:1 or a fragment thereof and which encode a peptide having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol.

42. (New) The nucleic acid molecule of claim 41, wherein the nucleic acid molecule (b) encodes at least a peptide, or fragment thereof, having the amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 or SEQ ID NO:13.

43. (New) The nucleic acid molecule of claim 41, wherein the nucleic acid molecule (d) comprises a nucleotide sequence having at least 40%, 50%, 60%, 70%, 80% or 90% identity with the sequence of SEQ ID NO:1 or a fragment thereof and which encode a peptide having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol.

44. (New) The nucleic acid molecule of claim 41, wherein the nucleic acid molecule is a single or double strand polynucleotide, oligonucleotide, genomic DNA, cDNA, RNA, mRNA.

45. (New) An expression vector, comprising at least one of the nucleic acid molecules (a), (b), (c), (d) of claim 41.

46. (New) The expression vector of claim 45, wherein the expression vector further comprises a regulatory nucleic acid sequence.

47. (New) The expression vector of claim 46, wherein the regulatory nucleic acid sequence is linked to the nucleic acid molecule encoding the polypeptide.

48. (New) The expression vector of claim 46, wherein the regulatory nucleic acid sequence is that of a prokaryotic or eukaryotic promoter.

49. (New) The expression vector of claim 45, wherein at least two from the nucleic acid molecules of (a), (b), (c) and (d) are fused together in the vector.

50. (New) A host cell, wherein the host cell comprises the vector of claim 45.

51. (New) The host cell of claim 50, wherein the host cell is in the form of cell culture.

52. (New) The host cell of claim 50, wherein the host cell is a prokaryotic or eukaryotic cell.

53. (New) The host cell of claim 50, wherein the host cell is cultured to express a peptide having the amino acid sequence of SEQ ID NO: 2, or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of

cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol.

54. (New) The host cell of claim 50, wherein the host cell expresses at least a peptide, or a fragment thereof, having the amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 or SEQ ID NO:13.

55. (New) An isolated peptide comprising the amino acid sequence of SEQ ID NO: 2, or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol.

56. (New) The peptide of claim 55, wherein the peptide, or fragment thereof, comprises the amino acid sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 or SEQ ID NO:13.

57. (New) The peptide of claim 55, wherein the peptide is a fused peptide and comprises at least one peptide, or fragment thereof having the sequence of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 or SEQ ID NO:13.

58. (New) The peptide of claim 55, wherein the peptide is isolated and/or purified from a human or non-human animal species.

59. (New) The peptide of claim 55, wherein the peptide is isolated and/or purified from the venom.

60. (New) The peptide of claim 59, wherein the venom is from *Butthus martensii* Karsch.

61. (New) The peptide of claim 55, wherein the peptide is obtained from steps comprising:

- obtaining crude venom;
- carrying out gel filtration; and
- performing reverse-phase high performance liquid chromatography.

62. (New) The peptide of claim 55, wherein the molecular weight of the peptide is 16803 Da, 16790 Da ; 16791 Da or 17211 Da.

63. (New) The peptide of claim 55, wherein the peptide is isolated and/or purified from biological material, expressed from recombinant DNA, and/or prepared by chemical synthesis.

64. (New) An isolated peptide, wherein the peptide has the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of

serum cholesterol, and wherein the peptide has a molecular weight of 16803 Da, 16790 Da, 16791 Da or 17211 Da.

65. (New) The isolated peptide of claim 64, wherein the peptide is isolated and/or purified from the venom of *Buthus martensi* Karsch.

66. (New) A pharmaceutical preparation comprising a peptide, wherein the peptide is at least one of:

- (a) an isolated peptide comprising the amino acid sequence of SEQ ID NO: 2 or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol; or
- (b) an isolated peptide, wherein the peptide has the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol, and wherein the peptide has a molecular weight of 16803 Da, 16790 Da, 16791 Da or 17211 Da.

67. (New) The pharmaceutical preparation of claim 66, wherein the pharmaceutical preparation further comprises a pharmaceutically acceptable carrier, diluent, excipient or a combination thereof.

68. (New) The pharmaceutical preparation of claim 66, wherein the pharmaceutically preparation is in the form of oral, parenteral, injection, topical, and/or implant preparation.

69. (New) A method for the treatment or prophylaxis of disorders characterised by the accumulation of cholesterol, its by-product and/or related lipid derived products, the method comprising a step of administering to a subject in need at least one of:

- (a) a peptide comprising the amino acid sequence of SEQ ID NO: 2, or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol; and/or
- (b) an isolated peptide, wherein the peptide has the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol, and wherein the peptide has a molecular weight of 16803 Da, 16790 Da, 16791 Da or 17211 Da.

70. (New) The method of claim 69, wherein the peptide is at least one peptide or a fused peptide, or fragment thereof, comprising the amino acid sequence of at least one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 and SEQ ID NO:13.

71. (New) The method of claim 69, wherein the by-product comprises bile acid.

72. (New) The method of claim 69, wherein the related lipid derived products comprises HDL, LDL and/or VLDL.

73. (New) The method of claim 69, wherein the disorders comprise hypertension, atherosclerosis, stroke, neurovascular and/or cardiovascular disorders.

74. (New) The method of claim 69, wherein the peptide is administered with a pharmaceutically acceptable carrier, diluent, excipient or a combination thereof.

75. (New) The method of claim 69, wherein the peptide is administered locally, by injection, implantation, topical administration to a tissue locus, parenterally and/or orally.

76. (New) A method for the treatment of cholesterol independent and pleiotropic conditions, the method comprising a step of administering to a subject in need at least one of:

- (a) a peptide comprising the amino acid sequence of SEQ ID NO: 2;
- (b) an isolated peptide comprising the amino acid sequence of SEQ ID NO: 2, or a variant, derivative and/or fragment thereof having the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol; or

(c) an isolated peptide, wherein the peptide has the function of HMGCoA reductase inhibitor, phosphomevalonate inhibitor, reducing the accumulation of cholesterol in the cholesterol biosynthesis pathway and/or reducing the level of serum cholesterol, and wherein the peptide has a molecular weight of 16803 Da, 16790 Da, 16791 Da or 17211 Da.

77. (New) The method of claim 76, wherein the peptide is at least one peptide or a fused peptide, or fragment thereof, comprising the amino acid sequence of at least one of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 and SEQ ID NO:13.

78. (New) The method of claim 76, wherein the cholesterol independent and pleiotropic conditions comprise atherosclerotic stabilization, amelioration of endothelial dysfunction, improved coronary artery compliance, prevention of plaque rupture, and/or thrombus formation.